

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

PETITION FEE

Under 37 CFR 1.17(f), (g) & (h)

JUL 25 2005

TRANSMITTAL

(Fees are subject to annual revision)

Send completed form to: Commissioner for Patents
P.O. Box 1450, Alexandria, VA 22313-1450*TPW*

<i>OIF</i>	<i>PAID</i>
------------	-------------

Application Number	**10/811,878**
Filing Date	**March 30, 2004**
First Named Inventor	**A. SATO, et al**
Art Unit	
Examiner Name	
Attorney Docket Number	**1213.43685X00**

Enclosed is a petition filed under 37 CFR §1.102(d) that requires a processing fee (37 CFR 1.17(f), (g), or (h)). Payment of \$ 130.00 is enclosed.

This form should be included with the above-mentioned petition and faxed or mailed to the Office using the appropriate Mail Stop (e.g., Mail Stop Petition), if applicable. For transmittal of processing fees under 37 CFR 1.17(i), see form PTO/SB/17i.

Payment of Fees (small entity amounts are NOT available for the petition (fees)

- The Commissioner is hereby authorized to charge the following fees to Deposit Account No. 50-1417:
- petition fee under 37 CFR 1.17(f), (g) or (h) any deficiency of fees and credit of any overpayments
- Enclose a duplicative copy of this form for fee processing.
- Check in the amount of \$ _____ is enclosed.
- Payment by credit card (From PTO-2038 or equivalent enclosed). Do not provide credit card information on this form.

Petition Fees under 37 CFR 1.17(f):**Fee \$400****Fee Code 1462**

For petitions filed under:

- § 1.53(e) - to accord a filing date.
 § 1.57(a) - to according a filing date.
 § 1.182 - for decision on a question not specifically provided for.
 § 1.183 - to suspend the rules.
 § 1.378(e) for reconsideration of decision on petition refusing to accept delayed payment of maintenance fee in an expired patent.
 § 1.741(b) - to accord a filing date to an application under § 1.740 for extension of a patent term.

Petition Fees under 37 CFR 1.17(g):**Fee \$200****Fee code 1463**

For petitions filed under:

- §1.12 - for access to an assignment record.
 §1.14 - for access to an application.
 §1.47 - for filing by other than all the inventors or a person not the inventor.
 §1.59 - for expungement of information.
 §1.103(a) - to suspend action in an application.
 §1.136(b) - for review of a request for extension of time when the provisions of section 1.136(a) are not available.
 §1.295 - for review of refusal to publish a statutory invention registration.
 §1.296 - to withdraw a request for publication of a statutory invention registration filed on or after the date the notice of intent to publish issued.
 §1.377 - for review of decision refusing to accept and record payment of a maintenance fee filed prior to expiration of a patent.
 §1.550(c) - for patent owner requests for extension of time in ex parte reexamination proceedings.
 §1.956 - for patent owner requests for extension of time in inter partes reexamination proceedings.
 § 5.12 - for expedited handling of a foreign filing license.
 § 5.15 - for changing the scope of a license.
 § 5.25 - for retroactive license.

Petition Fees under 37 CFR 1.17(h):**Fee \$130****Fee Code 1464**

For petitions filed under:

- §1.19(g) - to request documents in a form other than that provided in this part.
 §1.84 - for accepting color drawings or photographs.
 §1.91 - for entry of a model or exhibit.
 §1.102(d) - to make an application special.
 §1.138(c) - to expressly abandon an application to avoid publication.
 §1.313 - to withdraw an application from issue.
 §1.314 - to defer issuance of a patent.

Name (Print/Type)**Carl J. Brundidge****Registration No. (Attorney/Agent)****29,621****Signature****Date****July 25, 2005**

This collection of information is required by 37 CFR 1.114. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



1213.43685X00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: A. SATO, et al

Serial No.: 10/811,878

Filed: March 30, 2004

For: INFORMATION PROCESSING SYSTEM AND METHOD

**PETITION TO MAKE SPECIAL
UNDER 37 CFR §1.102(MPEP §708.02)**

MS Petition

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

July 25, 2005

Sir:

Applicants hereby petition the Commissioner to make the above-identified application special in accordance with 37 CFR §1.102(d). Pursuant to MPEP §708.02(VIII), Applicants state the following.

(A) This Petition is accompanied by the fee set forth in 37 CFR §1.17(h).

The Commissioner is hereby authorized to charge any additional payment due, or to credit any overpayment, to Deposit Account No. 50-1417.

(B) All claims are directed to a single invention.

If the Office determines that all claims are not directed to a single invention, Applicant will make an election without traverse as a prerequisite to the grant of special status in conformity with established telephone restriction practice.

07/26/2005 HAL111 00000057 10811878
01 FC:1464 130.00 0P

(C) A pre-examination search has been conducted.

The search was directed towards a storage system. In particular, the search was directed towards an information processing system including an information processing apparatus which is used to operate a plurality of applications to request data input/output from a storage and a management host which manages the storage, an information processing system including a storage which stores a file, a plurality of information processing apparatuses which are used to operate an application requesting input/output of data stored in the file from the storage and a management host which manages the storage, a control method implemented in the information processing system and a program to calculate load data in the information processing system.

According to the present invention, the storage and the information processing apparatus constitute an access process section for processing an access request from the application and the information processing apparatus includes an access monitoring section which monitors an access request from the application and obtains information about the access request for each of the applications.

The management host according to the present invention includes an acceptance section which accepts specification of a new application, an estimated load calculation section which calculates estimated load data in the case of addition of the new application based on information obtained by the

access monitoring section and a load data output section which outputs estimated load calculated by the estimated load calculation section.

In the information processing system which includes a storage which stores a file, a file system is provided for processing an access request from the application to the file. The access monitoring section monitors an access request sent from the file system to the storage and obtains information about the access request and the access information output section collects information about the access request and adds up the information corresponding to the application.

The file system could, for example, be replaced by a database management system which processes an access request from the application to the database. According to the present invention, the access monitoring section monitors an access request sent from the application to the database management system and obtains information about the access request and the access information output section collects about the access request and adds the information corresponding to the application.

The search of the above features was conducted in the following areas:

<u>Class</u>	<u>Subclass</u>
707	9, 200
709	223, 226
710	15, 17-18, 36
711	112
718	105

Additionally, a computer database search was conducted on the USPTO systems EAST and WEST.

(D) The following is a list of the references deemed most closely related to the subject matter encompassed by the claims:

<u>U.S. Patent Number</u>	<u>Inventors</u>
5,640,600	Satoh et al
<u>U.S. Patent Application Publication No.</u> <u>Inventor(s)</u>	
2002/0032777	Kawata et al
2002/0053029	Nakamura et al
2004/0111725	Srinivasan et al
2004/0133707	Yoshiya et al

A copy of each of these references (as well as other references uncovered during the search) is enclosed in an accompanying IDS.

(E) It is submitted that the present invention is patentable over the references for the following reasons.

It is submitted that the cited references, whether taken individually or in combination with each other, fail to teach or suggest the invention as claimed. In particular, the cited references, at a minimum, fail to teach or suggest in combination with the other limitations recited in the claims:

a first feature of the present invention as recited in independent claim 1 wherein an access monitoring section is provided which monitors an access request from an application and obtains information about the access request for each of the applications and an estimated load calculation section is provided which calculates estimated load data in case of addition of the new application based on information obtained by the access monitoring section;

a second feature of the present invention as recited in independent claim 5, wherein an access monitoring section is provided which monitors an access request from the application to the database management system and obtains information about the access request and an estimated load calculation section is provided which calculates estimated load data in case of addition of the new application based on current load data calculated by the current load calculation section and based on information obtained by the access monitoring section;

a third feature of the present invention as recited in independent claim 6, wherein an access monitoring section is provided which monitors an access request sent from the file system to the storage and obtains information about the access request and a current load calculation section is provided which calculates current load data based on information obtained by the access monitoring section;

a fourth feature of the present invention as recited in independent claim 7, of obtaining information about an access request for each of the applications and calculating estimated load data in case of addition of a new application based on information about the obtained access request; and

a fifth feature of the present invention as recited in independent claim 9, wherein means is provided for monitoring an access request from the application and obtaining information about the access request for each of the applications and means is provided for calculating estimated load data in case of addition of the new application based on the calculated current load data and information about the obtained access request.

To the extent applicable to the present Petition, Applicants submit that although the distinguishing feature(s) may represent a substantial portion of the claimed invention, the claimed invention including said feature(s) and their inter-operation provides a novel storage system and system and method related to or implemented in or by said storage system not taught or suggested by any of the references of record.

The references considered most closely related to the claimed invention are briefly discussed below:

Satoh (U.S. Patent No. 5,640,600) discloses a storage controller 2 for managing storage devices 3. The controller 2 has a bus access part 204 for gaining access to a bus. The controller 2 also has a bus load estimating means (201-202). A bus load estimating means (201-202) estimates bus load characteristics as an index based on an amount of data transfer during a sequential access to the storage device 3 (step 802). A load data output section outputs the estimated load characteristics to I/O processor 14. (See, e.g., Abstract; column 2, lines 5-23 and lines 29-40; column 4, lines 1-17; column 7, lines 16-23; and Figures 1, 16).

However, unlike the present invention, Satoh does not teach or suggest that information processing apparatus comprises an access monitoring section which monitors an access request from the applications and obtains information about the access request for each of the applications. Furthermore, Satoh does

not teach or suggest that the management host comprises an acceptance section which accepts specification of a new application.

More particularly, Satoh does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 6, the above described fourth feature of the present invention as recited in independent claim 7 and the above described fifth feature of the present invention as recited in independent claim 9, in combination with the other limitations recited in each of the independent claims.

Kawada (U.S. Patent Application Publication No. 2002/0032777) discloses load distribution performed on a basis real time load state of servers. Load distribution device has a means for estimating load magnitude. Specifically, the load distributing device is provided with a load estimate table generating means for estimating a load. (See e.g., Abstract and column 1, line 49, through column 2, line 54).

However, unlike the present invention, Kawada does not teach or suggest that the storage and the information processing apparatus constitute an access process section for processing an access request from the application; and that the information processing apparatus comprises an access monitoring section which monitors an access request from the application and obtains information about the access request for each of said applications. Furthermore, Kawada

does not teach or suggest the management host comprises: an acceptance section which accepts specification of a new application.

More particularly, Kawada does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 6, the above described fourth feature of the present invention as recited in independent claim 7 and the above described fifth feature of the present invention as recited in independent claim 9, in combination with the other limitations recited in each of the independent claims.

Nakamura (U.S. Patent Application Publication No. 2002/0053029) discloses an access registering part 103 with an access information reporting part 107. A dynamic permissible access number calculating part 207 communicates with a load and traffic monitoring device 212. The load and traffic monitoring device 212 extracts periodically a load condition of a service server 300. (See e.g., Abstract; paragraphs 36, 42, 48-49, 117, 132, and 213-214; and Figures 1-4).

However, Nakamura does not teach or suggest that the management host comprises an acceptance section which accepts specification of a new application. Furthermore, Nakamura does not teach or suggest an estimated load calculation section which calculates estimated load data in case of addition of the new application based on information obtained by the access monitoring

section and load data output section which outputs estimated load data calculated by the estimated load calculation section.

More particularly, Nakamura does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 6, the above described fourth feature of the present invention as recited in independent claim 7 and the above described fifth feature of the present invention as recited in independent claim 9, in combination with the other limitations recited in each of the independent claims.

Srinivasan (U.S. Patent Application Publication No. 2004/011725) discloses an application scheduler 240 having a monitor helper 242. The application scheduler 240 connected to a load balancer 260. The application scheduler 150 checks whether to start a new application instance (step 602). The application scheduler 150 adds the new application instance to a list managed by a load balancer 110. (See e.g., Abstract; paragraphs 22-23, 27, 30, 36, 39-40, and 49; and Figures 2-8).

However, unlike the present invention, Srinivasan does not teach or suggest an acceptance section which accepts specification of a new application; and that the information processing apparatus comprises an access monitoring section which monitors an access request from the application and obtains information about the access request for each of said applications. Furthermore, Srinivasan does not teach or suggest that the management host comprises an

estimated load calculation section which calculates estimated load data in case of addition of the new application based on information obtained by the access monitoring section and a load data output section which outputs estimated load data calculated by the estimated load calculation section.

More particularly, Srinivasan does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 6, the above described fourth feature of the present invention as recited in independent claim 7 and the above described fifth feature of the present invention as recited in independent claim 9, in combination with the other limitations recited in each of the independent claims.

Yoshiya (U.S. Patent Application Publication No. 2004/0133707) discloses an access execution unit for accessing a storage device (RAID). Flow estimate module 74 (RLU unit) calculates an estimate load calculation. An actual load management module 76 calculates a hardware use amount (actual load) when the hardware use amount is defined. The flow estimate module 74 uses a point system in RLU unit and determines the estimate values of a number of disk commands and a number of times of data transfer. The actual load management module 76 checks whether the load exceeding a hardware capability (a threshold). The outputs are sent to H-I/O control or L-I/O control. (See e.g., Abstract; paragraphs 19-20, 25-26, 29, 74, 80, 96-99, 102, 119, and 145; and Figures 7 and 13).

However, unlike the present invention, Yoshiya does not teach or suggest that the information processing apparatus comprises an access monitoring section which monitors an access request from the application and obtains information about the access request for each of said applications. Furthermore, Yoshiya does not teach or suggest the management host comprises an acceptance section which accepts specification of a new application.

More particularly, Yoshiya does not teach or suggest the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 6, the above described fourth feature of the present invention as recited in independent claim 7 and the above described fifth feature of the present invention as recited in independent claim 9, in combination with the other limitations recited in each of the independent claims.

Therefore, since the cited references fail to teach or the above described first feature of the present invention as recited in independent claim 1, the above described second feature of the present invention as recited in independent claim 5, the above described third feature of the present invention as recited in independent claim 6, the above described fourth feature of the present invention as recited in independent claim 7 and the above described fifth feature of the present invention as recited in independent claim 9, in combination with the other limitations recited in each of the independent claims, it is submitted that all of the

claims are patentable over the cited references whether said references are taken individually or in combination with each other.

(F) Conclusion

Applicant has conducted what it believes to be a reasonable search, but makes no representation that "better" or more relevant prior art does not exist. The United States Patent and Trademark Office is urged to conduct its own complete search of the prior art, and to thoroughly examine this application in view of the prior art cited herein and any other prior art that the United States Patent and Trademark Office may locate in its own independent search. Further, while Applicant has identified in good faith certain portions of each of the references listed herein in order to provide the requisite detailed discussion of how the claimed subject matter is patentable over the references, the United States Patent and Trademark Office should not limit its review to the identified portions but rather, is urged to review and consider the entirety of each reference, and not to rely solely on the identified portions when examining this application.

In view of the foregoing, Applicant requests that this Petition to Make Special be granted and that the application undergo the accelerated examination procedure set forth in MPEP 708.02 VIII.

(G) Fee (37 C.F.R. 1.17(h))

The fee required by 37 C.F.R. § 1.17(h) is to be paid by:

[X] the Credit Card Payment Form (attached) for \$130.00.

[] charging Account _____ the sum of \$130.00.

A duplicate of this petition is attached.

Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (1213.43685X00).

Respectfully submitted,

MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C.

Carl I. Brundidge
Reg. No. 29,621

CIB/jdc
(703) 684-1120

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- BLACK BORDERS**
- IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- FADED TEXT OR DRAWING**
- BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- SKEWED/SLANTED IMAGES**
- COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- GRAY SCALE DOCUMENTS**
- LINES OR MARKS ON ORIGINAL DOCUMENT**
- REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.